

REMARKS

Claims 1-6 were examined and stand rejected. Applicants amend Claim 1. Applicants reserve the right to prosecute the former claims in a divisional or continuation application. Applicants respectfully request reconsideration of pending Claims 1-6, as amended, in view of at least the following remarks.

I. Claims Rejected Under 35 U.S.C. §102

The Patent Office rejects Claims 1-6 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(A) obvious over Kuribayashi et al., ("Battery Characteristics with Various Carbonaceous Materials," Journal of Power Sources 54 (1995) 1-5.) ("Kuribayashi"). Applicants respectfully traverse this rejection.

Applicants respectfully assert that the Examiner has failed to adequately set forth a *prima facie* rejection under 35 U.S.C. §102(b). "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" Lindemann Maschinenfabrik v. American Hoist & Derrick ("Lindemann"), 730 F.2d 452, 1458 (Fed. Cir. 1994)(emphasis added). Additionally, each and every element of the claim must be exactly disclosed in the anticipatory reference. Titanium Metals Corp. of America v. Banner ("Banner Titanium"), 778 F.2d 775, 777 (Fed. Cir. 1985).

Claim 1, as amended, includes the following claim features, which are neither taught nor suggested by Kuribayashi:

the amorphous graphitizable carbon shell coating is derived from an amorphous carbon precursor selected from the group consisting of pitch, coal based oil and heavy oil.

The selection of a carbon precursor from the group consisting of pitch, coal based oil and heavy oil is included to illustrate that the carbon shell coating is a graphitizable carbon, which is known to those skilled in the art as a soft carbon. According to the Examiner, Kuribayashi teaches an amorphous graphitizable carbon shell coating. Applicants respectfully traverse the Examiner's contention.

In contrast, Kuribayashi teaches a carbonaceous active material comprising a core shell structure produced from graphite and pseudo-graphite coated with pitch blended phenol resin and green mesophase pitch coated with phenol resin and ground graphite powder, as active materials for negative electrodes (See Abstract). In contrast, coke is formed by carbonization of bituminous coal, petroleum and coal-tar pitch.

As is further described at col. 2, lines 10-14, Kuribayashi teaches carbonaceous materials having a core shell structure, with a shell comprised of coke-like carbon and the core composed of graphite or pseudo-graphite. Kuribayashi further describes the goal of obtaining a carbonation

material with a higher energy density than coke by coating a blend of phenol resin and fine ground graphite on green mesophase pitch beads.

Applicants respectfully submit that the pitch blended phenol resin and green mesophase pitch coated with phenol resin would be interpreted by those skilled in the art as a modified phenol resin and therefore identified as a non-graphitizable carbon or hard carbon. Further, after careful review of Kuribayashi, the coke-like carbon coating as taught by Kuribayashi refers to a coating which exhibits a higher energy density than that exhibited by coke. Moreover, Applicants respectfully submit that those skilled in the art recognize coke as a non-graphitizable carbon or hard carbon.

Accordingly, Applicants respectfully submit that a coke-like shell coating, as taught by Kuribayashi fails to teach or suggest an amorphous graphitizable carbon shell coating derived from an amorphous carbon precursor selected from the group consisting of pitch, coal based oil and heavy oil, as required by Claim 1, as amended.

Furthermore, Applicants respectfully submit that the Examiner did not establish a *prima facie* case of anticipation in view of Kuribayashi, which according to the Examiner inherently discloses the displaying of at least two exothermal peaks overlapping to form shoulders, as required by Claim 1. Applicants respectfully submit that the Examiner cannot establish a *prima facie* case of anticipation since the Examiner has failed to provide a basis in fact under technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the prior art. Ex Parte Levy, 17 U.S.P.Q. 2d 1461, 1464 (Bd. Pat. App. and Intr. 1990).

The Federal Circuit Court of Appeals of In Re Rijckaert, 9, F.3d 1531 (Fed. Cir. 1993) held that:

[T]he fact that a certain result or characteristic may occur or be present in the prior art is not efficient to establish the inherency of that result or characteristic. (9 F.3d at 1534, 28 U.S.P.Q. 2d at 1955, 1957.)

According to the Examiner:

differential thermo analysis is not disclosed or discussed in Kuribayashi; however, the properties indicated by differential thermo analysis would be inherent. The carbonaceous material would have two separate inherent exothermic peak values based on the graphite material and the non-graphite material. Thus, the graphite and carbon core materials will inherently have two specific peaks by DTA and the claims are anticipated. (Final Office Action, pg. 3, lines 14 - pg. 4, line 2.)

However, the Federal Circuit Court of Appeals in In re Robinson, 169 F.3d 743, 49 U.S.P.Q. 2d 1949 held that:

[T]o establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference and that it would be so recognized by persons of ordinary skill. The

inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. (169 F.3d at 745, 49 U.S.P.Q. 2d at 1950-1951.)

Applicants respectfully submit that the Examiner is using inherency to anticipate Claim 1 based on the possibility that the carbonaceous active material as taught by Kuribayashi will have two exothermic peaks with overlapping shoulders. However, as indicated above, Kuribayashi teaches a non-graphitizable shell coating, while Claim 1 requires a graphitizable shell coating. Accordingly, Applicants submit that the Examiner has failed to anticipate the displaying of at least two exothermic peaks overlapping to form shoulders, as required by Claim 1, since it is unclear whether the overlapping of the shoulders formed by the peaks as required by Claim 1 would be recognized by persons of ordinary skill in the art in view of Kuribayashi.

Therefore, Applicants respectfully submit that for at least the reasons described above, the Examiner has failed to establish a *prima facie* case of anticipation in view of Kuribayashi as to Claim 1. Accordingly, Claim 1, as amended, is patentable over Kuribayashi as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102 rejection of Claim 1.

Regarding Claims 2-6, Claims 2-6 depend from Claim 1 and therefore include the patentable claim features of Claim 1, as described above. Accordingly, Claims 2-6, for at least the reasons described above, are patentable over the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(b) rejection of Claims 2-6.

II. Claims Rejected Under 35 U.S.C. §103(a)

In the alternative, the Examiner has rejected Claims 1-6 under 35 U.S.C. §103(a) as obvious over Kuribayashi. Applicants respectfully traverse this rejection.

As indicated above, Claim 1 is amended to illustrate that:

the amorphous graphitizable carbon shell coating is derived from an amorphous carbon precursor selected from the group consisting of pitch, coal based oil and heavy oil.

As a result, Claim 1, as amended, requires a soft carbon shell coating. In contrast, Kuribayashi teaches a coke-like shell coating which is further described within Kuribayashi as a pitch blended phenol resin and green phase mesophase pitch coated with phenol resin and ground graphite powder. As indicated above, it is recognized by those skilled in the art that pitch blended phenol resin is a modified phenol resin and is therefore a non-graphitizable carbon or hard carbon. Accordingly, Applicants respectfully submit that the teachings of Kuribayashi are limited to a shell coating comprised of hard or non-graphitizable carbon.

However, the Federal Circuit Court of Appeals in In re Rijckaert, 9 F.3d 1531, 28 U.S.P.Q. 2d 1955 (Fed. Cir. 1993) held that:

burden of presenting a *prima facie* case of obviousness. . . . "A *prima facie* case of obviousness is established when the teaching from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." . . . If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. (Emphasis added.) 9 F.3d at 1532, 28 U.S.P.Q. 2d at 1956.

Applicants respectfully submit that one of ordinary skill of the art, based on the teachings of Kuribayashi would not have deduced the claimed subject matter due to the fact that Claim 1 requires a graphitizable carbon shell coating, whereas Kuribayashi teaches a non-graphitizable carbon shell coating. Therefore, Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness because Kuribayashi fails to teach or suggest a non-graphitizable carbon shell coating, as required by Claim 1 of the invention. Accordingly, for at least the reasons described above, Claim 1 as amended is patentable over Kuribayashi as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of Claim 1.

Regarding Claims 2-6, Claims 2-6 depend from Claim 1 and therefore include the patentable claim features of Claim 1. Accordingly, Claims 2-6, for at least the reasons described above, are patentable over Kuribayashi, as well as the references of record. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §103(a) rejection of Claims 2-6.

Regarding Applicant's amendment of Claim 1 After Final, Applicants respectfully submit that entry of the amendment to Claim 1 is proper as the amendment to Claim 1 is necessitated to place the application in condition for allowance by modifying previously introduced subject matter of Claim 1, removed via Preliminary Amendment dated August 5, 2002.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending (1) are in proper form, (2) are neither obvious nor anticipated by the relied upon art of record, and (3) are in condition for allowance. A Notice of Allowance is earnestly solicited at the earliest possible date. If the Office believes that a telephone conference would be useful in moving the application forward to allowance, the Office is encouraged to contact the undersigned at (310) 207-3800.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

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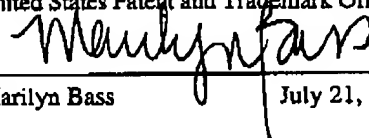
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I hereby certify that this correspondence is being transmitted via facsimile on the date shown below to the United States Patent and Trademark Office.


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July 21, 2003